

REMARKS

Applicant thanks examiner Kruer for the Office Action mailed June 4, 2003, [Paper 6]. In response to the June Office Action, the present application has been carefully reviewed. Entry of the present amendment and reconsideration of the application is respectfully requested.

Statutory Double Patenting

*Claims 37, 39, 42-45, 47-50, 52-54, 56-60, 62-68, 70-72 and 74-83*

Claims 37, 39, 42-45, 47-50, 52-54, 56-60, 62-68, 70-72 and 74-83 stand rejected under 35 USC §101 as claiming the same invention of Claims 1-30 of US Patent 6,406,785.

Applicant respectfully submits the claims of US Patent 6,406,785, as shown in the attached Certificate of Correction signed and sealed on September 2, 2003 US Patent 6,406,785, are directed to *cross linked* UHMW polyethylene particles (Claims 1-3); *cross linked* UHMW polyolefin particles (Claim 4); surface treated thermoplastic *cross linked* particles (Claims 5-8); *cross linked* surface treated olefinic particles (Claims 9-15); surface treated, *cross linked* olefinic particles (Claim 16); *cross linked* surface treated olefinic particles (Claims 17-23); and surface treated, *cross linked* olefinic particles (Claims 23-30). [emphasis added]

In contrast, the present claims recite particles which are not cross linked. Specifically:

"UHMW polyethylene particles having a polar functional group" (Claims 37-39, 73 and 74); "surface treated UHMW polyolefin particles" (Claims 40-41 and 75 - 77); "surface treated thermoplastic particles" (Claims 42-46); "surface treated olefinic particles" (Claims 47-55, 78 and 79); "surface treated olefinic particles" (Claim 56); "surface treated olefinic particles" (Claims 57-64, 80 and 81); "surface treated olefinic particles" (Claims 65-72, 82 and 83).

None of the pending claims, Claims 37-83 include any of the limitations: *cross linked* UHMW polyethylene particles; *cross linked* UHMW polyolefin particles; surface treated thermoplastic *cross linked* particles; *cross linked* surface treated olefinic particles; surface treated, *cross linked* olefinic particles; *cross*

*linked* surface treated olefinic particles; and surface treated, *cross linked* olefinic particles.

Therefore, the present claims are not claiming the same invention as US Patent 6,406,785 and thus applicant requests the statutory double patenting rejection be withdrawn.

Non Statutory Double Patenting

*Claims 38, 40, 46 and 55*

Claims 38, 40, 46 and 55 stand rejected under the judicially created doctrine of obviousness-type double patenting.

In view of the distinction between the present claims and the claims of US Patent No. 6,406,785, applicant respectfully submits Claims 38, 40, 46 and 55 are patentably distinct from the claims of US Patent No. 6,406,785.

Rejections under 35 USC §103

*Claims 37-72 and 75*

Examiner Kruer relies upon the primary reference Chihara (US Patent 5,115,007) to disclose weatherstrips for automobile glass run channels in which an EPDM substrate is coated with a low friction, abrasion resistant coating composition which is comprised of a thermosetting polymeric binder derived from a block urethane prepolymer solution which is compounded with silicone oil and a cross linking agent. [Paper 6, page 3]

As stated in Chihara, the abrasion resistant and low friction characteristics are imparted by the thermosetting composition. (Col. 2, Lines 13-15) The micropowders relied upon by the examiner are an optional aspect of Chihara and are not employed to provide abrasion resistance or low friction. (Col. 2, Lines 27-29) Chihara expressly states "an important aspect of the present invention is the use of cross linking agents to obtain improved physical properties such as abrasion resistance." (Col. 4, Lines 62-64). Thus, Chihara discloses a specific thermoset material for providing abrasion resistance and low friction. The micropowders of Chihara are not necessary and do not provide the desired

abrasion resistance and low friction functionality. (Abstract, Col. 2, lines 12-27, Col. 4, lines 62-64).

Chihara repeatedly discloses a flat, uniform surface of the resulting cured film. Chihara states "the appearance of the cured coating film is uniform and homogenous." (Col. 7, Lines 19-21)

In addition, "all the mixtures (resin I) of B, C, D, E and F dry to form a flat and uniform coating." (Col. 10, line 35-36.)

Further, as set forth in Column 6, Lines 61-66, the additives are employed in part, to "provide a flat, non-glossy appearance."

The micropowders of Chihara are used as fillers, to control viscosity and provide a flat, non-glossy appearance, proper hardness and toughness to the applied cured coating film. (Col. 6, Lines 61-66.)

A *prima facie* showing of obviousness cannot be made by relying upon a reference to preclude a possibility. Rather, the reference must teach the asserted combination. Specifically,

to establish obviousness based on a combination of the elements disclosed in the prior art, there must be some motivation, suggestion or teaching of the desirability of making the specific combination that was made by the applicant. See *In re Dance*, 160 F.3d 1339, 1343, 48 USPQ2d 1635, 1637 (Fed. Cir. 1998); *In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). Even when obviousness is based on a single prior art reference, there must be a showing of a suggestion or motivation to modify the teachings of that reference. See *B.F. Goodrich Co. v. Aircraft Breaking Sys. Corp.*, 72 F.3d 1577, 1582, 37 USPQ2d 1314, 1318 (Fed. Cir. 1996). *In re Kotzab*, 55 USPQ2d 1313, 1316-1317 (Fed. Cir. 2000)

As mentioned previously, more than a mere scintilla of evidence is necessary to support the Board's implicit conclusion that "one system" is equal to "one sensor." Based on the entirety of Evans' disclosure, we cannot say that there is such relevant evidence as a reasonable mind might accept as adequate to support the conclusion that "one system" means "one sensor." *In re Kotzab*, at 1317.

Therefore, applicant respectfully submits the reliance upon Chihara is legally insufficient.

*Issue - Formation of surface projections*

With respect to Chihara, the examiner asserts "it is the examiner's position that if the micropowders are uniformly distributed in the composition in the maximum amount (60 parts by weight), at least some of the particles will be present on the coating surface and cause surface projections." (Paper 6, Page 5)

However, the examiner has not explained why such micropowders directed to providing a flat non-glossy appearance would be oriented to project from an adjacent portion of the resin, rather than i.e., coplanar with the adjacent portion of the thermosetting resin thereby forming the expressly recited "flat non-glossy" appearance of Chihara.

Applicant submits Chihara suggests the surface tension of the resin would preclude the micropowders from projecting through the surface tension. Rather than projecting through the surface, the particles would minimize the energy of the system and align parallel to the surface of the resin. The micropowders in such a coating would tend to align with the surface tension force of the resin matrix, thereby minimizing the energy potential of the system and thus, avoid forming surface projections.

The examiner further states that the amount of micropowders employed in Chihara, if uniformly distributed that at least some of the particles would be present on the coating surface and cause surface projections. (Paper 6, Page 5).

However, this assertion is contrary to the repeated statements of Chihara, the primary reference, wherein micropowders are employed and the resulting surface of the film is flat, non-glossy (Col. 6, Lines 64-65), uniform and homogenous (Col. 7, Lines 19-20) and "flat and uniform. (Col. 10, Lines 35-36.) These terms teach away from surface projection particles in a contact layer.

Again, it appears the surface tension force would dominate over the Chihara micropowders and the surface would be flat as set forth in Chihara.

*Issue - thermoplastic grains in a thermoset resin*

The examiner relies upon Kamei to disclose thermoplastic grains in a thermoplastic resin. (Paper 6, Page 3, Paragraph 5). The reliance upon Kamei does not cure the deficiencies of Chihara.

The examiner asserts the motivation for employing the thermoplastic grains of Kamei in the thermoset resin of Chihara is to improve the sliding property and wear resistance of the coating composition. (Paper 6, Page 4)

However, this asserted "obvious combination" is contrary to the express teaching of Chihara, which relies upon the *thermosetting resin* to provide the low friction and wear resistance, rather than any particles. The micropowders do not form surface projections and in fact are optional in Chihara. (Col. 2, lines 27-29) Chihara is directed to solving problems with napped or coated glass run channels. (Col. 1, lines 27-30) Chihara solves this problem by virtue of a thermosetting coating, which itself is abrasion resistant and low friction. (Col. 2, lines 12-14) It would be contrary to Chihara to employ an unnecessary material cost and manufacturing step required for inclusion of the asserted particles.

Further, no basis has been identified for interchanging the micropowders in a thermoset resin of Chihara with thermoplastic grains from a thermoplastic resin in Kamei. Conversely, nor is there any suggestion that the thermoplastic resin of Kamei can be replaced by the thermoset resin of Chihara, for particles.

With respect to the examiner's assertion that the interchangeability of thermoplastic particles in a thermoplastic resin matrix for thermoplastic in a thermoset resin matrix would be obvious, the examiner has provided no basis or suggestion in any of the references for such interchangeability between thermoplastic and thermoset resins.

The reliance upon the desire to form coating compositions is contrary to each of the references relied upon. That is, the flat thermoset structure of Chihara and the thermoplastic grain and the thermoplastic resin of Kato, Ohdaira and Kamei, wherein Kato and Ohdaira actually melt the particles, do not suggest the present claims.

*Issue - Affinity of treated particles with respect to thermoset resin versus thermoplastic resin*

Examiner Krueer relies upon Ohdaira to disclose UHMW particles which are surface treated to provide better affinity in a *thermoplastic* resin matrix in which they are embedded. The examiner asserts it would have been obvious to treat the surface of the UHMW particles by introducing polar functional groups. The motivation being to improve the affinity of the particles to the *thermoset* polyurethane matrix. (Paper 6, page 4-5).

This reliance upon Ohdaira is contrary to the express teaching of Ohdaira. Ohdaira completely melts the particles in a *thermoplastic* resin and is thus, more closely aligned with Kamei. Specifically Ohdaira states "the *melt blending* of the components (A) [the thermoplastic resin] and (B) [ultra high molecular weight polyolefin powder] can be carried out at a temperature, for example, higher than the melting points of the components (A) and (B)." [emphasis added] (Col. 8, lines 3-5). Thus, Ohdaira teaches the full melting of all particles. Therefore, it would be contrary to the express teaching of Ohdaira to form surface particles as set forth in the present claims.

The examiner asserts Ohdaira suggests the surface treatment to provide better affinity of the particles to a *thermoset* polyurethane matrix. However, this is also contrary to Ohdaira, which employs a *thermoplastic* matrix.

No showing has been made as to a suggestion or motivation for substituting a thermoset resin for a thermoplastic resin. An asserted suggestion of improving the characteristics of a device is insufficient. There must be a suggestion as to the interchangeability of a thermoset resin for a thermoset resin

with respect to thermoplastic particles. This is insufficient disclosure and suggestion to sustain a *prima facie* showing of obviousness.

Examiner Kruer further states in Paper 6, Page 5, that it would have been obvious to insure the UHMW particles do not melt during production of the coating composition by employing a melting temperature above the curing temperature of the thermoset polyurethane matrix.

In addition to the previously set forth distinctions, this is contrary to Ohdaira. Specifically, Ohdaira melts the particles. (Col. 8, line 3-5.) Ohdaira entirely melts the thermoplastic particles in a thermoplastic resin. Thus, as the examiner states, if one skilled in the art would have been motivated to look at the teachings of Ohdaira, the particles would be melted.

The examiner states one skilled in the art would have been motivated to use such particles (with Kamei) and the coating composition disclosed by Chihara. (Paper 6, Page 4) However, this assertion is contrary to both references. Specifically, Chihara is directed to a thermoset resin to provide low friction and wear resistance so as to provide a flat, non-glossy appearance. (Col. 6, Lines 63-65) In contrast, Kamei has the purpose to obtain a surface appearance almost identical to an embossing process. (Col. 2, Line 65) The Kamei surface of the thin film is between adjacent powder grains being made uneven, whereby a surface appearance almost identical to a uniform embossing is obtained. (Col. 2, Lines 13-21)

The examiner is asserting it would be obvious to modify the primary reference directed to a cured thermoset resin having a flat glossy uniform finish with a thermoset resin with surface altering thermoplastic particles in a thermoplastic resin of (Kamei) to provide an embossed appearance. Applicant respectfully submits this cannot sustain a *prima facie* showing of obviousness.

Applicant respectfully submits the reliance upon Kato, U.S. Patent No. 5,447,671 (the '671 patent) fails to cure the deficiencies of the primary or secondary references. Specifically, the '671 patent discloses the use of

thermoplastic particles in a thermoplastic carrier, that is, the same construction as Kamei. Specifically, the '671 patent states "the contacting layer is formed of mixing two synthetic resins of different melting points [that is, each of the resins is thermoplastic] and *melting* the lower melting point particles and avoiding fully melting the higher melting point particles. The resulting Kato weatherseal has only thermoplastic particles in a thermoplastic resin.

Thus, Kato also teaches away from the proposed use of thermoplastic particles in a thermoset resin matrix.

*Claims 73, 74 and 76-83*

Claims 73, 74 and 76-83 stand rejected under 35 USC §103 as being unpatentable over Chihara in view of Camei, Ohdaira, Kato and further in view of Hazelton (US Patent 4,894,408). The examiner relies upon Hazelton to disclose a thermoplastic elastomer composition that is useful in weather stripping applications. The examiner asserts it would have been obvious to utilize the thermoplastic elastomer of Hazelton as the substrate taught in Chihara because the thermoplastic elastomer retains sealing capability in dynamic situations. (Paragraph 6, Page 6).

Hazelton is directed to a dynamically vulcanized alloy (DVA) comprising a thermoplastic copolymer resin and a rubber wherein at least a part of the rubber has been dynamically vulcanized to a fully cured state. The proposed substitution of the Chihara EPDM substrate with thermoplastic elastomer would be contrary to the express disclosure of Chihara.

Specifically, Chihara is directed to automotive window glass run channels made from ethylene-propylene-diene polymers (EPDM).

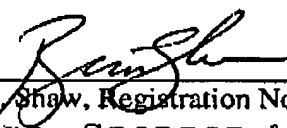
Chihara is expressly directed to the bonding performance of a coating to an EPDM substrate. Applicant respectfully submits the proposed interchangeability to thermoplastic elastomers and EPDM as the substrate is just not supported by the cited references. Chihara repeatedly and expressly directed



to a coating for an EPDM substrate. (Col. 1, lines 18-20; Col. 2, lines 23-25; Col. 7, lines 8-10; Col. 10, lines 32-33, 41-42 and 59-60; Col. 11, lines 14-15, 23-24 and 43-44; Col. 12, lines 22-25, 35-36 and 50-53 and Col. 16, lines 33-36 and 44-45).

Therefore, applicant respectfully submits all the pending claims, Claims 37-83 are in condition for allowance, and such action is earnestly solicited. If, however, the examiner believes any further issues remain, he is cordially invited to call the undersigned so that such matters can be promptly resolved.

Respectfully submitted,

  
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